of observation, in five others (including β 648, of which there is no other orbit) they are fairly satisfactory, but in the remaining six (β 524, β 883, OΣ 235, ξ *Scorpii*, β 416, and 85 *Pegasi*) the residuals in angle average over 23°, and one of the distance residuals, in β 416, exceeds 0″.4.

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NOTE ON THE BINARY STAR ξ *SCORPII*.

Two orbits for this well-known binary system have recently been published, one by DOBERCK[1] and one by LOHSE.[2] Both are based on practically the same data as my orbit published in 1905,[3] and both computers have adopted the assumption made by me, that the periodic time is about 44.5 years instead of over one hundred years.

The three sets of elements do not differ greatly, but the motion in the apparent orbit has been so rapid during the past three years that even slight variations in the elements lead to decided changes in the residuals derived by comparing the computed and observed positions.

The following tabulation gives my measures made after my orbit was published, and the residuals derived by comparing them with the three sets of elements:—

Date.	θ_0	ρ_0	Nights.	(O–C) A.	(O–C) D.	(O–C) L.
1905.50	13°.8	0″.18	3	— 5°.6 + 0″.02	— 19°.1 + 0″.03	— 14°.8 + 0″.02
1906.38	68 .7	0 .23	4	— 13 .3 + 0 .02	— 25 .6 + 0 .03	— 29 .6 ± 0 .00
1907.40	108 .2	0 .32	4	— 9 .4 + 0 .01	— 17 .4 + 0 .01	— 21 .3 — 0 .05
1908.48	125 .8	0 .36	2	— 10 .4 — 0 .06	— 15 .6 — 0 .07	— 18 .8 — 0 .14

These residuals put the correctness of the short period of revolution beyond question, and indicate that the other elements of the orbit are fairly well determined. Further computation will not be profitable until the companion star has passed nearly through the second quadrant.

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[1] *Astronomische Nachrichten*, **174**, 257, 1907.
[2] *Pub. d. Astrophysik. Observ.* zu Potsdam, **20**, Pt. I, 124, 1908.
[3] *Lick Observatory Bulletin*, No. 107. 1905.